



PATENT
Attorney Docket No.: COOL-01301

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:)	Group Art Unit: 3753
Thomas W. Kenny et al.)	Examiner:
Serial No.: 10/680,584)	<u>TRANSMITTAL LETTER</u>
Filed: October 6, 2003)	162 N. Wolfe Road
For: METHOD AND APPARATUS FOR)	Sunnyvale, CA 94086
EFFICIENT VERTICAL FLUID)	(408) 530-9700
DELIVERY FOR COOLING A)	Customer No.: 28960
HEAT PRODUCING DEVICE)	

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313

Sir:

Enclosed please find an Information Disclosure Statement and Form PTO-1449, including copies of the references contained thereon, for filing in the U.S. Patent and Trademark Office.

You will also find enclosed the associated Transmittals, Electronic Information Disclosure Statements, and United States Patent and Trademark Office Acknowledgment Receipts for the electronically filed Information Disclosure Statement (EFS ID #59961); (EFS ID #59962); (EFS ID #59963) and (EFS ID #59964) filed on April 28, 2004.

The Commissioner is hereby authorized to charge any additional fee or credit overpayment to our Deposit Account No. 08-1275. **An originally executed duplicate of this transmittal is enclosed for this purpose.**

Respectfully submitted,
HAVERSTOCK & OWENS LLP

Dated: 4-29-04

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CERTIFICATE OF MAILING (37 CFR § 1.8(a))

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) **INFORMATION DISCLOSURE**
) **STATEMENT**

) 162 N. Wolfe Road
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Sir:

The citations listed below, copies attached, may be material to the examination of the above-identified application, and are therefore submitted in compliance with the duty of disclosure defined in 37 C.F.R. §§ 1.56 and 1.97. The Examiner is requested to make these citations of official record in this application.

United States Patents or Published Patent Applications have been filed electronically (EFS ID #59961); (EFS ID #59962); (EFS ID #59963) and (EFS ID #59964). Applicants have become aware of the following printed publication which may be material to the examination of this application:

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This Information Disclosure Statement under 37 C.F.R. §§ 1.56 and 1.97 is not to be construed as a representation that a search has been made, that additional information material to the examination of this application does not exist, or that anyone or more of these citations constitutes prior art.

Respectfully submitted,
HAVERSTOCK & OWENS LLP

Dated: 4-29-04

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Applicants: Thomas W. Kenny et al.

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				Filing Date: October 6, 2003	Group Art Unit: 3753
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Serial No.: 10/680,584

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(Use Several Sheets If Necessary)

Applicants: Thomas W. Kenny et al.

(37 CFR § 1.98(b))

Filing Date: October 6, 2003

Group Art Unit: 3753

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Examiner:

Date Considered:

EXAMINER:

Initial citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

FORM PTO-1449 (Modified)		U.S. Department of Commerce Patent and Trademark Office		Attorney Docket No.: COOL-01301		Serial No.: 10/680,584	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use Several Sheets If Necessary) (37 CFR § 1.98(b))				Applicants: Thomas W. Kenny et al.			
				Filing Date: October 6, 2003		Group Art Unit: 3753	
OTHER DOCUMENTS (Including Author, Title, Date, Relevant Pages, Place of Publication)							
	FJ	W.E. Morf et al., <u>Partial electroosmotic pumping in complex capillary systems Part 1: Principles and general theoretical approach</u> , October 16, 2000, <u>Sensors and Actuators B 72 (2001)</u> , pages 266-272.					
	FK	M. Esashi, <u>Silicon micromachining and micromachines</u> , September 1, 1993, <u>Wear</u> , Vol. 168, No. 1-2, (1993), pages 181-187.					
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	GJ	B. X. Wang et al., <u>Experimental investigation on liquid forced-convection heat transfer through microchannels</u> , 1994, <u>Int. J. Heat Mass Transfer</u> , Vol. 37 Suppl. 1, pages 73-82.					
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EXAMINER: Initial citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.							

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GL	Gokturk Tune et al., <u>Heat transfer in rectangular microchannels</u> , 2002, Int. J. Heat Mass Transfer, 45 (2002), pages 765-773.
GM	D. B. Tuckerman et al., <u>High-Performance Heat Sinking for VLSI</u> , 1981, IEEE Electron Device Letters, Vol. EDL-2, No. 5, pages 126-129.
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Electronic Version 1.1

Stylesheet Version v1.1.1

Title of Invention	METHOD AND APPARATUS FOR EFFICIENT VERTICAL FLUID DELIVERY FOR COOLING A HEAT PRODUCING DEVICE										
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Attorney Docket Number:											
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TRANSMITTAL
Electronic Version v1.1 Stylesheet Version v1.1.0

Title of Invention	METHOD AND APPARATUS FOR EFFICIENT VERTICAL FLUID DELIVERY FOR COOLING A HEAT PRODUCING DEVICE						
Application Number:	10/680584 *10/680584*						
Date:	2003-10-06						
First Named Applicant:	Thomas W. Kenny						
Confirmation Number:	5276						
Attorney Docket Number:							
<p>I hereby certify that the use of this system is for OFFICIAL correspondence between patent applicants or their representatives and the USPTO. Fraudulent or other use besides the filing of official correspondence by authorized parties is strictly prohibited, and subject to a fine and/or imprisonment under applicable law.</p> <p>I, the undersigned, certify that I have viewed a display of document(s) being electronically submitted to the United States Patent and Trademark Office, using either the USPTO provided style sheet or software, and that this is the document(s) I intend for initiation or further prosecution of a patent application noted in the submission. This document(s) will become part of the official electronic record at the USPTO.</p>							
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Thomas B. Haverstock Registered Number: 32571	/tbh/	Attorney					

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ELECTRONIC INFORMATION DISCLOSURE STATEMENT

Electronic Version v18

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Confirmation Number:	5276						
First Named Applicant:	Thomas Kenny						
Attorney Docket Number:							
Search string:	(3654988 or 3817321 or 3823572 or 3923426 or 3929154 or 4109707 or 4138996 or 4194559 or 4248295 or 4312012 or 4450472 or 4485429 or 4516632 or 4540115 or 4561040 or 4567505 or 4573067 or 4664181 or 4758926 or 4866570 or 4868712 or 4894709 or 4896719 or 4908112 or 4938280 or 5009760 or 5016138 or 5057908 or 5058627 or 5070040 or 5083194 or 5088005 or 5096388 or 5099311 or 5099910 or 5125451 or 5131233 or 5203401 or 5218515 or 5219278 or 5232047 or 5239200 or 5263251 or 5274920 or 5308429 or 5309319 or 5317805 or 5325265 or 5336062 or 5380956).pn.						
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Note: Applicant is not required to submit a paper copy of cited US Patent Documents							
Init	Cite.No.	Patent No.	Date	Patentee	Kind	Class	Subclass
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Signature

Examiner Name	Date

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TRANSMITTAL

Electronic Version v1.1

Stylesheet Version v1.1.0

Title of Invention	METHOD AND APPARATUS FOR EFFICIENT VERTICAL FLUID DELIVERY FOR COOLING A HEAT PRODUCING DEVICE		
Application Number:	10/680584	*10/680584*	
Date:	2003-10-06		
First Named Applicant:	Thomas W. Kenny		
Confirmation Number:	5276		
Attorney Docket Number:			
<p>I hereby certify that the use of this system is for OFFICIAL correspondence between patent applicants or their representatives and the USPTO. Fraudulent or other use besides the filing of official correspondence by authorized parties is strictly prohibited, and subject to a fine and/or imprisonment under applicable law.</p> <p>I, the undersigned, certify that I have viewed a display of document(s) being electronically submitted to the United States Patent and Trademark Office, using either the USPTO provided style sheet or software, and that this is the document(s) I intend for initiation or further prosecution of a patent application noted in the submission. This document(s) will become part of the official electronic record at the USPTO.</p>			
Submitted by:		Elec. Sign.	Sign. Capacity
Thomas B. Haverstock		/tbh/	Attorney
Registered Number: 32571			

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Comments	

ELECTRONIC INFORMATION DISCLOSURE STATEMENT

Electronic Version v18

Stylesheet Version v18.0

Title of Invention	METHOD AND APPARATUS FOR EFFICIENT VERTICAL FLUID DELIVERY FOR COOLING A HEAT PRODUCING DEVICE						
Application Number:	10/680584 *10/680584*						
Confirmation Number:	5276						
First Named Applicant:	Thomas Kenny						
Attorney Docket Number:							
Search string:	(5383340 or 5421943 or 5427174 or 5436793 or 5459099 or 5508234 or 5514832 or 5514906 or 5544696 or 5548605 or 5575929 or 5579828 or 5585069 or 5641400 or 5692558 or 5696405 or 5703536 or 5704416 or 5727618 or 5759014 or 5763951 or 5774779 or 5800690 or 5801442 or 5835345 or 5836750 or 5858188 or 5863708 or 5869004 or 5870823 or 5874795 or 5876655 or 5880017 or 5880524 or 5901037 or 5936192 or 5940270 or 5942093 or 5964092 or 5965001 or 5965813 or 5978220 or 5997713 or 5998240 or 6007309 or 6010316 or 6013164 or 6019882 or 6054034 or 6068752).pn.						
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Note: Applicant is not required to submit a paper copy of cited US Patent Documents							
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	1	5383340	1995-01-24	Larson et al.			
	2	5421943	1995-06-06	Tam et al.			
	3	5427174	1995-06-27	Lomolino et al.			
	4	5436793	1995-07-25	Sarwo et al.			
	5	5459099	1995-10-17	Hsu			
	6	5508234	1996-04-16	Dusablon, Sr. et al.			

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8	5514906	1996-05-07	Love et al.
9	5544696	1996-08-13	Leland
10	5548605	1996-08-20	Benett et al.
11	5575929	1996-11-19	Yu et al.
12	5579828	1996-12-03	Reed et al.
13	5585069	1996-12-17	Zanzucchi et al.
14	5641400	1997-06-24	Kaltenbach et al.
15	5692558	1997-12-02	Hamilton et al.
16	5696405	1997-12-09	Weid
17	5703536	1997-12-30	Davis et al.
18	5704416	1998-01-06	Larson et al.
19	5727618	1998-03-17	Mundinger et al.
20	5759014	1998-06-02	Van Lintel
21	5763951	1998-06-09	Hamilton et al.
22	5774779	1998-06-30	Tuchinsky
23	5800690	1998-09-01	Chow et al.
24	5801442	1998-09-01	Hamilton et al.
25	5835345	1998-11-10	Staskus et al.
26	5836750	1998-11-17	Cabuz
27	5858188	1999-01-12	Soane et al.
28	5863708	1999-01-26	Zanzucchi et al.
29	5869004	1999-02-09	Parce et al.
30	5870823	1999-02-16	Bezama et al.
31	5874795	1999-02-23	Sakamoto
32	5876655	1999-03-02	Fisher
33	5880017	1999-03-09	Schwiebert et al.
34	5880524	1999-03-09	Xie
35	5901037	1999-05-04	Hamilton et al.
36	5936192	1999-08-10	Tauchl
37	5940270	1999-08-17	Puckett
38	5942093	1999-08-24	Rakestraw et al.
39	5964092	1999-10-12	Tozuka et al.
40	5965001	1999-10-12	Chow et al.
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42	5978220	1999-11-02	Frey et al.
43	5997713	1999-12-07	Beetz, Jr. et al.
44	5998240	1999-12-07	Hamilton et al.
45	6007309	1999-12-28	Hartley
46	6010316	2000-01-04	Haller et al.
47	6013164	2000-01-11	Paul et al.
48	6019882	2000-02-01	Paul et al.
49	6054034	2000-04-25	Soane et al.
50	6068752	2000-05-30	Dubrow et al.
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Examiner Name		Date	

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UNITED STATES PATENT AND TRADEMARK OFFICE
ACKNOWLEDGEMENT RECEIPT

Electronic Version 1.1

Stylesheet Version v1.1.1

Title of Invention	METHOD AND APPARATUS FOR EFFICIENT VERTICAL FLUID DELIVERY FOR COOLING A HEAT PRODUCING DEVICE										
Submission Type:	Information Disclosure Statement										
Application Number:	10/680584	*10/680584*									
EFS ID:	59964										
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First Named Applicant:	Thomas Kenny										
Attorney Docket Number:											
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Electronic Version v1.1 Stylesheet Version v1.1.0

Title of Invention	METHOD AND APPARATUS FOR EFFICIENT VERTICAL FLUID DELIVERY FOR COOLING A HEAT PRODUCING DEVICE		
Application Number:	10/680584	*10/680584*	
Date:	2003-10-06		
First Named Applicant:	Thomas W. Kenny		
Confirmation Number:	5276		
Attorney Docket Number:			
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Submitted by:		Elec. Sign.	Sign. Capacity
Thomas B. Haverstock		/tbh/	Attorney
Registered Number: 32571			

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ELECTRONIC INFORMATION DISCLOSURE STATEMENT

Electronic Version v1.8

Stylesheet Version v18.0

Title of
Invention**METHOD AND APPARATUS FOR EFFICIENT VERTICAL
FLUID DELIVERY FOR COOLING A HEAT PRODUCING
DEVICE**

Application Number: 10/680584 *10/680584*
Confirmation Number: 5276
First Named Applicant: Thomas Kenny
Attorney Docket Number:
Search string: (6632655 or 20010016985 or 20010024820 or
20010044155 or 20010045270 or
20010046703 or 20010055714 or
20020011330 or 20020134543).pn.

US Patent Documents

Note: Applicant is not required to submit a paper copy of cited US Patent Documents

Init	Cite.No.	Patent No.	Date	Patentee	Kind	Class	Subclass
	1	6632655	2003-10-14	Mehta et al.	B1		

US Published Applications

Note: Applicant is not required to submit a paper copy of cited US Published Applications

Init	Cite.No.	Pub. No.	Date	Applicant	Kind	Class	Subclass
	1	20010016985	2001-08-30	Insley et al.	A1		
	2	20010024820	2001-09-27	Mastromatteo et al.	A1		
	3	20010044155	2001-11-22	Paul et al.	A1		
	4	20010045270	2001-11-29	Bhatti et al.	A1		
	5	20010046703	2001-11-29	Burns et al.	A1		
	6	20010055714	2001-12-27	Cettour-Rose et al.	A1		
	7	20020011330	2002-01-31	Insley et al.	A1		
	8	20020134543	2002-09-26	Estes et al.	A1		

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Signature

Examiner Name

Date

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ACKNOWLEDGEMENT RECEIPT**

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Stylesheet Version v1.1.1

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Application Number:	10/680584	*10/680584*									
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ICON1	5276										
ISYS5	Filename= N/A BusinessRule= Validation System/Function Call Information. #Supporting Msg:Server unable to validate the Confirmaton/Application numbers at this time. They will be checked by PTO personnel later.										
First Named Applicant:	Thomas Kenny										
Attorney Docket Number:											
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Acknowledgement Receipt

Page 2 of 2

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Digital Certificate Holder Name:	cn=Thomas B. Haverstock,ou=Registered Attorneys,ou=Patent and Trademark Office,ou=Department of Commerce,o=U.S. Government,c=US		

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Electronic Version v1.1	
Stylesheet Version v1.1.0	

Title of Invention	METHOD AND APPARATUS FOR EFFICIENT VERTICAL FLUID DELIVERY FOR COOLING A HEAT PRODUCING DEVICE		
Application Number:	10/680584	*10/680584*	
Date:	2003-10-06		
First Named Applicant:	Thomas W. Kenny		
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Attorney Docket Number:			
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Submitted by:		Elec. Sign.	Sign. Capacity
Thomas B. Haverstock		/tbh/	Attorney
Registered Number: 32571			

Documents being submitted	Files
us-ids	COOL01301C-usidst.xml
	us-ids.dtd
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Comments	

ELECTRONIC INFORMATION DISCLOSURE STATEMENT

Electronic Version v1.8

Stylesheet Version v1.8.0

Title of Invention	METHOD AND APPARATUS FOR EFFICIENT VERTICAL FLUID DELIVERY FOR COOLING A HEAT PRODUCING DEVICE						
Application Number:	10/680584	*10/680584*					
Confirmation Number:	5276						
First Named Applicant:	Thomas Kenny						
Attorney Docket Number:							
Search string:	(6090251 or 6096656 or 6100541 or 6101715 or 6119729 or 6126723 or 6129145 or 6129260 or 6131650 or 6146103 or 6154363 or 6159353 or 6171067 or 6174675 or 6176962 or 6186660 or 6210986 or 6216343 or 6221226 or 6227809 or 6234240 or 6238538 or 6277257 or 6287440 or 6301109 or 6313992 or 6317326 or 6321791 or 6322753 or 6324058 or 6337794 or 6351384 or 6388317 or 6396706 or 6400012 or 6406605 or 6415860 or 6416642 or 6417060 or 6424531 or 6443222 or 6444461 or 6457515 or 6495015 or 6537437 or 6543521 or 6553253 or 6572749 or 6588498 or 6591625),pn.						
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Note: Applicant is not required to submit a paper copy of cited US Patent Documents							
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	1	6090251	2000-07-18	Sundberg et al.			
	2	6096656	2000-08-01	Matzke et al.			
	3	6100541	2000-08-08	Nagle et al.			
	4	6101715	2000-08-15	Fuesser et al.			
	5	6119729	2000-09-19	Oberholzer et al.			
	6	6126723	2000-10-03	Drost et al.			

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7	6129145	2000-10-10	Yamamoto et al.	
8	6129260	2000-10-10	Andrus et al.	
9	6131650	2000-10-17	North et al.	
10	6146103	2000-11-14	Lee et al.	
11	6154363	2000-11-28	Chang	
12	6159353	2000-12-12	West et al.	
13	6171067	2001-01-09	Parce	B1
14	6174675	2001-01-16	Chow et al.	B1
15	6176962	2001-01-23	Soane et al.	B1
16	6186660	2001-02-13	Kopf-Sill et al.	B1
17	6210986	2001-04-03	Arnold et al.	B1
18	6216343	2001-04-17	Leland et al.	B1
19	6221226	2001-04-24	Kopf-Sill	B1
20	6227809	2001-05-08	Forster et al.	B1
21	6234240	2001-05-22	Cheon	B1
22	6238538	2001-05-29	Parce et al.	B1
23	6277257	2001-08-21	Paul et al.	B1
24	6287440	2001-09-11	Arnold et al.	B1
25	6301109	2001-10-09	Chu et al.	B1
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28	6321791	2001-11-27	Chow	B1
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31	6337794	2002-01-08	Agonafer et al.	B1
32	6351384	2002-02-26	Darkoku et al.	B1
33	6388317	2002-05-14	Reese	B1
34	6396706	2002-05-28	Wohlfarth	B1
35	6400012	2002-06-04	Miller et al.	B1
36	6406605	2002-06-18	Moles	B1
37	6415860	2002-07-09	Kelly et al.	B1
38	6416642	2002-07-09	Alajoki et al.	B1
39	6417060	2002-07-09	Tavkhelidze et al.	B1
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